

## CLAIMS

1. An apparatus for securing the comfort and health of human beings by the production and maintenance of conditioned air, said apparatus comprising;
  - (a) a flux generator for generating a flux of gaseous particulate precursor material;
  - (b) an activator functionally located within an air passageway for activating said particulate precursor material in a gas-to-particle reaction for forming atmospherically unstable products for reducing the contact potential of harmful airborne agents.
2. An apparatus as in claim 1, wherein said flux generator is of a type for forming acidic atmospherically unstable products.
3. An apparatus as in claim 1, wherein said activator is of a type for creating an intense electrical field.
4. An apparatus as is claim 1, wherein said activator is a UV light source.
5. An apparatus as in claim 1, wherein said flux generator is a generator for gaseous terpene compounds.
6. An apparatus as in claim 1, further comprising a face mask portion.
7. An apparatus for detecting harmful airborne agents, said apparatus comprising;
  - (a) a flux generator for generating a flux of gaseous particulate precursor material;
  - (b) an activator for activating said particulate precursor material in a gas-to-particle reaction for coating said harmful airborne agents for forming coated harmful airborne agents;
  - (c) a detector for detecting light emitted by said coated harmful airborne agents for detecting said harmful airborne agents.

8. An apparatus as in claim 7, a source of organic material for forming atmospherically unstable products in the form of organic peroxides in a gas-to-particle reaction for forming peroxide coated harmful airborne agents.
9. An apparatus as in claim 8, further comprising an excitation source for exciting said peroxide coated harmful airborne agents for emitting light therefrom.
10. A method for the purification of a fluid, said method comprising the steps of;
- (a) providing a gaseous organic material;
  - (b) oxidizing said gaseous organic material for forming organic acids;
  - (c) and mixing said organic acids with said fluid for the purification of said fluid.
11. A method according to claim 10, further comprising the step oxidizing said gaseous organic material by subjecting said gaseous organic material to both ozone and UV radiation.